

forth, as in *Cotylorhiza* and *Aurelia*, as unpaired tongue-shaped lobules, but in pairs as in *Discomedusa*. The annular vessel is already completely closed, but the buccal arms, abundantly beset with tentacles, are still simple and undivided. Probably the preceding Ephyrae, which have not yet been observed, agree with those of *Cotylorhiza*.

XXIII.—*The Lepidoptera collected during the recent Expedition of H.M.S. 'Challenger.'*—Part II. By ARTHUR G. BUTLER, F.L.S., F.Z.S., Assistant Keeper, Zoological Department, British Museum (Natural History).

THE first part of the Lepidoptera (which at the time I supposed to be the complete collection) obtained by the naturalists of H.M.S. 'Challenger' appeared in the 'Annals' for June 1883, pp. 402–428; since the publication of that account, which embraced the species obtained in the Philippine, Aru, Admiralty, Fiji, and Friendly Islands, series have been received which were collected in the islands of St. Thomas, Bermuda, Rat Island, Ké Dulan, Ternate, and Amboina, amounting in all to one hundred and two species, which have yet to be recorded*.

The collections from St. Thomas and Bermuda being from the New World, are here treated separately from those of the other islands. They are as follows:—

RHOPALOCERA.

Nymphalidæ.

EUPLEINÆ.

1. *Anosia leucogyne*, sp. n.

This is the West-Indian form of *A. plexippus* of North America, from which it chiefly differs in the external black border of the secondaries of the male being either unspotted or very imperfectly spotted with white; the female also is usually (though not invariably) paler, and has the outer border

* In an envelope were numerous specimens of *Pyrameis carye*, Hübn., two damaged specimens of *Leucania decolorata*, Blanch., and two unrecognizable Micro-Lepidoptera from Juan Fernandez, taken on the 14th and 15th November 1875; these I have not entered in this List.

of the secondaries less distinctly spotted with white than in the northern form. The expanse of wings varies from 76–106 millim., the females being not unfrequently dwarfed.

St. Thomas, March 1878.

The northern form, *A. plexippus*, is the type found in the Australian region.

Nymphaliniæ.

2. *Dione vanillæ*.

Papilio vanillæ, Linnæus, Mus. Lud. Ulr. p. 306 (1764).

St. Thomas, March 1878.

The North-American species, which has hitherto stood as a synonym of this butterfly, being perfectly distinct both in size, form, pattern, and colour, must henceforth stand as *Dione passifloræ* (under which name it was figured by Abbot).

3. *Junonia cænia*.

Junonia cænia, Hübner, Samml. exot. Schmett. (1816–24).

St. Thomas, March 1878; Bermuda, in April.

Heliconiniæ.

4. *Heliconius charithonia*.

Papilio charithonia, Linnæus, Syst. Nat. i. p. 757 (1767); Cramer, Pap. Exot. ii. pl. cxc. F (1779).

St. Thomas, March 1878.

The examples from St. Thomas are typical, and therefore distinct from those of Mexico and St. Domingo; the latter represent a larger longer-winged insect, with much narrower yellow bands; why it should not have been considered distinct by lepidopterists generally it would be hard to say.

Lycænidaæ.

5. *Tmolus columella*.

Hesperia columella, Fabricius, Ent. Syst. iii. 1, p. 282. n. 83 (1793).

♂. St. Thomas, March 1878.

Papilionidaæ.

Pieriniæ.

6. *Appias Poeyi*?

Appias Poeyi, Butler, Proc. Zool. Soc. 1872, p. 49.

♂. St. Thomas, March 1878.

The specimen before me is slightly shorter in the wing than those which we have from St. Domingo and Honduras; but without seeing more specimens it would be rash to regard it as distinct.

7. *Ganoris cleomes*.

Pieris cleomes, Boisduval & Leconte, Lép. Am. Sept. p. 43, pl. xvi. (1833).

♂. St. Thomas, March 1878.

8. *Callidryas sennæ*.

Papilio sennæ, Linnæus, Syst. Nat. i. p. 764. n. 103 (1766).

♂ ♀. St. Thomas, March 1878.

9. *Terias euterpe*.

Colias euterpe, Ménétériés, Bull. Mosc. 1832, p. 299; Nouv. Mém. Mosc. iii. p. 121, pl. xi. fig. 4 (1834).

♂. St. Thomas, March 1878.

PAPILIONINÆ.

10. *Papilio polydamas*.

Papilio polydamas, Linnæus, Mus. Lud. Ulr. p. 192 (1764); Drury, Ill. Ex. Ent. i. pl. xvii. figs. 1, 2 (1773).

♀. St. Thomas, March 1878.

Hesperiidæ.

11. *Goniuris proteus*.

Papilio proteus, Linnæus, Mus. Lud. Ulr. p. 333 (1764); Clerck, Icones, pl. xlii. fig. 1 (1764).

St. Thomas, March 1878.

12. *Goniuris dorantes*.

Papilio dorantes, Stoll, Suppl. Cramer, pl. xxxix. fig. 9 (1790).

St. Thomas, March 1878.

13. *Proteides amyntas*.

Papilio amyntas, Fabricius, Syst. Ent. p. 533 (1775).

St. Thomas, March 1878.

14. *Pamphila pustula*.

Thymelicus pustula, Hübner, Zutr. exot. Schmett. figs. 625, 626 (1832).

♂ ♀. St. Thomas, March 1878.

15. *Pyrgus syrictus*.

Papilio syrictus, Fabricius, Syst. Ent. p. 534 (1775).

St. Thomas, March 1878.

HETEROCERA.

Sphingidæ.

16. *Chærocampa tersa*.

Sphinx tersa, Drury, Ill. Exot. Ent. i. p. 61, pl. xxviii. fig. 3.

Bermuda.

Arctiidæ.

17. *Composia sybaris*.

Phalæna (Bombyx) sybaris, Cramer, Pap. Exot. i. p. 112, pl. lxxi. fig. E (1779).

St. Thomas, March 1878.

Lithosiidæ.

18. *Deiopeia ornatrix*.

Noctua ornatrix, Linnæus, Syst. Nat. i. p. 839 (1766).

St. Thomas, March 1878.

Leucaniidæ.

19. *Leucania antica*.

Leucania antica, Walker, Cat. Lep. Het. ix. p. 100 (1856).

Bermuda, in April.

This species was evidently the commonest moth met with at Bermuda.

Xylophasiidæ.

20. *Laphygma macra*.

Laphygma macra, Guénée, Noct. i. p. 157. n. 251 (1852).

Bermuda, in April.

21. *Perigea subaurea*.

Perigea subaurea, Guénée, Noct. i. p. 227. n. 362 (1852).

Bermuda, in April.

I have little doubt that I have rightly identified this species, although Guénée's description of the secondaries is hardly satisfactory; they are not "clear ochreous," but pearl-whitish with golden reflections; here, as in the primaries, Guénée seems to have described the shot tints rather than the true colour of the wing.

Plusiidæ.

22. *Plusia ou.*

Plusia ou, Guénée, Noct. ii. p. 96 (1852).

Bermuda, April 1873.

Remigiidæ.

23. *Remigia marcida.*

Remigia marcida, Guénée, Noct. iii. p. 317 (1852).

Bermuda, April 1873.

Thermesiidæ.

24. *Thermesia monstratura.*

Thermesia monstratura, Walker, Cat. Lep. Het. xv. p. 1564 (1858).

Bermuda, April 1873.

Margarodidæ.

25. *Margaronia jairusalis.*

Margaronia jairusalis, Walker, Cat. Lep. Het. xviii. p. 524 (1859).

Bermuda, in April.

26. *Margaronia flegia.*

Phalæna-Pyralis flegia, Cramer, Pap. Exot. ii. p. 66, pl. cxl. fig. D (1779).

St. Thomas.

Botydidæ.

27. *Botys? onophasalis.*

Botys onophasalis, Walker, Cat. Lep. Het. xviii. p. 735. n. 326 (1859).

Botys thisoalis, Walker, l. c. p. 737. n. 329 (1859).

St. Thomas.

Without going into the whole history of the genus I will not follow the example of one of our rising lepidopterists and

assert dogmatically that the above species either is or is not a true *Botys*; but one thing is certain, that the two names above associated were given to two specimens registered consecutively from the same collection. It is also certain that the species is nearly allied to Walker's "*Megaphysa?*" *serenalis*, which (in common with the other species referred by Walker to *Megaphysa*) has no affinity whatever to M. Guénée's genus.

Botys simmialis of Walker is also allied to *B. serenalis*.

Scopariidæ.

28. *Stenopteryx hybridalis*.

Pyralis hybridalis, Hübner, Pyral. p. 29, pl. xvii. fig. 114.

Bermuda, April 1873.

A few species were obtained at Teneriffe; but as they are well-known forms, it will be sufficient to enumerate them:—

Pararge meone, Esper; *Synchlœ doplidice*, Linn.; *Ganoris rapæ*, Linn.; a small moth, the body of which is too much injured to allow of its identification (in size and form of wings it corresponds with *Sterrha sacraria*, but the neuration differs not a little); and an imperfect specimen of *Hypena obacerralis*, Walk.,—five species in all, three of which are butterflies and two moths, all taken on the 14th February, 1873.

The remaining collections are distributed as follows:—

	Rat Island.	Ké Dulan.	Ternate.	Amboina.
<i>Radena meganira</i> , Godt.	*
<i>Limnas cratippus</i> , Felder	*	
<i>Salatura philene</i> , Cramer	*
— <i>affinis</i> , Fabric.	*		
<i>Ravadeba cleona</i> , Cramer	*
<i>Hamadryas niveipicta</i> , Butler	*		
<i>Vadebra Zinckenii</i> , Felder	*
— <i>Murrayi</i> , Butler	*
<i>Chirosa eurypon</i> , Hewits.	*		
<i>Hirdapa fraterna</i> , Felder	*		
<i>Salpinx pasithea</i> , Felder	*

	Rat Island.	Ké Dulan.	Ternate.	Ambouina.
<i>Melanitis taitensis</i> , <i>Felder</i>	*
— <i>solandra</i> , <i>Fabric.</i>	*	
— <i>constantia</i> , <i>Cramer</i>	*
<i>Lethe arete</i> , <i>Cramer</i>	*
<i>Calysime justina</i> , <i>Cramer</i>	*
<i>Mydosama remulia</i> , <i>Cramer</i>	*
— <i>asophis</i> , <i>Hewits</i>	*	
— <i>sirius</i> , <i>Fabric.</i>	*
<i>Ypthima norma</i> , <i>Westw.</i>	*
<i>Doleschallia australis</i> , <i>Felder</i>	*	..	
<i>Messaras Crameri</i> , <i>Felder</i>	*
<i>Cethosia insulata</i> , <i>Butler</i>	*	..	
— <i>cydippe</i> , <i>Linnaeus</i>	*
<i>Hypolimnas nerina</i> , <i>Fabric.</i>	*	
— <i>lasinassa</i> , <i>Cramer</i>	*
<i>Precis hedonia</i> , <i>Linn.</i>	*
— <i>timorensis</i> , <i>Walluce</i>	*	..	
<i>Gerydus Boisduvalii</i> , <i>Butler</i>	*
— <i>stygianus</i> , <i>Butler</i>	*	
<i>Tarucus plinius</i> , <i>Fabric.</i>	*
<i>Catochrysops trifractor</i> , <i>Butler</i>	*	
<i>Lampides ælianus</i> , <i>Fabric.</i>	*	..	
— <i>ætherialis</i> , <i>Butler</i>	
— <i>aratus</i> , <i>Cramer</i>	*	*
<i>Lycæna erinus</i> ?, <i>Fabric.</i>	*	
<i>Delias plexaris</i> , <i>Donovan</i>	*
<i>Terias photophila</i> , <i>Butler</i>	*	..	
— <i>biformis</i> , <i>Butler</i>	*
— <i>puella</i> , <i>Boisd.</i>	*	
— <i>lerna</i> , <i>Felder</i>	*
<i>Ornithoptera criton</i> , <i>Felder</i>	*	
<i>Papilio deiphontes</i> , <i>Felder</i>	*	
— <i>nicanor</i> , <i>Felder</i>	*	
— <i>severus</i> , <i>Cramer</i>	*
— <i>Thomsonii</i> , <i>Butler</i>	*	..	
— <i>ulysses</i> , <i>Linn.</i>	*
— <i>polyphontes</i> , <i>Boisd.</i>	*	
<i>Hesperia celænus</i> , <i>Cramer</i>	*
<i>Pamphila Moseleyi</i> , <i>Butler</i>	*	..	
— <i>phineus</i> , <i>Cramer</i>	*
— <i>prusias</i> , <i>Felder</i>	*
<i>Padraona sunias</i> ?, <i>Felder</i>	*	..	
<i>Tagiades japedus</i> , <i>Cramer</i>	*
<i>Protoparce cingulata</i> , <i>Fabric.</i>	*	
<i>Ophthalmis lincea</i> , <i>Cramer</i>	*	..	
<i>Cocytia Durvillei</i> , <i>Boisd.</i>	*	..	
<i>Euchromia ganymede</i> , <i>Doubl.</i>	*	..	
<i>Dyphlebia liboria</i> , <i>Cramer</i>	*
<i>Hypsa heliconia</i> , <i>Linn.</i>	*

	Rat Island.	Ké Dulan.	Ternate.	Amboina.
<i>Hypsa lanceolata</i> , Walker	*
<i>Cleis evander</i> , Cramer	*
<i>Artaxa simulans</i> , Butler	*
<i>Stilpnotia</i> , sp.	*
<i>Pegella ichorina</i> , Butler	*
<i>Bursada perdica</i> , Cramer	*
<i>Craspedosis ernestina</i> , Cramer	*
<i>Alcidis orontes</i> , Linn.	*
<i>Eumelea rosalia</i> , Cramer	*
— <i>ludovicata</i> , Guénée	*
<i>Xanthodes transversa</i> , Guénée	*
<i>Spiramia funestis</i> , Butler	*
<i>Ophiusa simillima</i> , Guénée	*
<i>Glyphodes Ledereri</i> , Butler	*

A series of Lepidoptera from Queensland was in such poor condition, and the species were so well known as common North-Australian forms, that I have not thought it worth while to record them; the most abundant species was *Ornithoptera richmondia*, Gray.

The following is a catalogue of the insular species:—

Nymphalidæ.

EUPLEINÆ.

1. *Radena meganira*.

Danaïs meganira, Godart, Enc. Méth. ix. p. 192 (1819).

♂ ♀. Amboina.

2. *Limnas cratippus*.

Danaïs cratippus, Felder, Sitzb. Acad. Wiss. Wien, math.-nat. Cl. xl. p. 449 (1860).

♂. Ternate.

3. *Salatura philene*.

Papilio philene, Cramer, Pap. Exot. iv. pl. cccclxxv. A, B (1782).

♂ ♀. Amboina.

4. *Salatura affinis*.

Papilio affinis, Fabricius, Syst. Ent. p. 511 (1775).

♂. Ké Dulan, 25th September, 1874.

5. *Ravadeba cleona*.

Papilio cleona, Cramer, Pap. Exot. iv. pl. cccclxxvii. F (1782).

♂. Amboina.

Up to the present time this species has been incorrectly identified in British collections, as evidenced by the locality given in Moore's recent Monograph—"Celebes." Cramer's species is of a pale (almost greenish) sulphur-yellow colour, not unlike the ground-tint of *R. lutescens*, but with the markings smaller and more restricted; on the other hand, the Celebes form (which may be called *R. luciplena*) is of a deep gamboge-yellow colour, especially in the male sex.

6. *Hamadryas niveipicta*, sp. n.

Closely allied to *H. nais* from Aru, but smaller; the spots on the primaries pure white (not greyish), sharply defined; a white longitudinal line from the base to the middle of the cell above, as well as below; the outer border of the secondaries narrower towards the anal angle than in *H. nais*. Expanse of wings 46 millim.

Ké Dulan, 25th September, 1874.

We also have a specimen in the Museum from N. Ceram.

7. *Vadebra Zinckenii*.

Euplaea Zinckenii, Felder, Reise der Nov. Lep. ii. p. 335.

♂ ♀. Amboina.

This is the Amboinese representative of *V. sepulchralis* of Java, specimens of which were evidently confounded with it by Felder.

8. *Vadebra Murrayi*, sp. n.

♂. Primaries above rich piceous brown (similar to *V. melina*), the external border and a diffused subapical band continuous with it slightly paler, and therefore redder in appearance; secondaries dark olivaceous brown, with white costal border; a diffused black nebula covering the lower half of the cell at the bases of the interno-median and median interspaces; external area, with the exception of the apical border, paler than the ground-colour; body dark piceous; head and collar black; the usual white dots on the collar. Wings below rufous-brown; primaries with the costal, subapical, and interno-median areas paler, the latter with two well-separated cinereous longitudinal streaks, the lower of which rests on the submedian vein; internal border white;

an oval bluish-white spot within the cell, a second lilacine white spot beyond it upon the second median interspace, and a large oval spot of the same colour below the latter on the first median interspace: secondaries with a bluish-white spot within the cell, and an arched series of six spots beyond it; three subapical white dots nearly parallel to the outer margin; the two usual white basal dots: body below much as in *V. melina* and allies. Expanse of wings 80 millim.

Amboina.

Decidedly smaller and of a different form from *V. melina*.

9. *Chirosa eurypon*.

Euplœa eurypon, Hewitson, Exot. Butt. ii. *Eupl.* pl. i. fig. 3 (1858).

♂ ♀. Ké Dulan, 25th September, 1874.

10. *Hirdapa fraterna*.

Euplœa fraterna, Felder, Reise der Nov. Lep. ii. p. 321.

♂. Ké Dulan, 25th September, 1874.

11. *Salpinx pasithea*.

Euplœa pasithea, Felder, Reise der Nov. Lep. ii. p. 318.

♂ ♀. Amboina.

SATYRINÆ.

12. *Melanitis taitensis*.

Cylo leda, var. *taitensis*, Felder, Verh. zool.-bot. Ges. Wien, xii. p. 493 (1862).

♂. Amboina.

13. *Melanitis solandra*.

Papilio solandra, Fabricius, Syst. Ent. p. 500 (1775).

♂. Ternate.

14. *Melanitis constantia*.

Papilio constantia, Cramer, Pap. Exot. ii. pl. cxxxiii. A, B (1779).

♀. Amboina.

15. *Lethe arete*.

Papilio arete, Cramer, Pap. Exot. iv. pl. cccxiii. E, F (1782).

♂ ♀. Amboina.

16. *Calysisme justina*.

Papilio justina, Cramer, Pap. Exot. iv. pl. cccxxvi. C (1782).

♂ ♀. Amboina.

17. *Mydosama remulia*.

Papilio remulia, Cramer, Pap. Exot. iii. pl. cccxxxvii. F, G (1782).

♂ ♀. Amboina.

18. *Mydosama asophis*.

Mycalasis asophis, Hewitson, Exot. Butt. iii. *Myc.* pl. iv. figs. 20, 21 (1862).

♀. Ternate.

19. *Mydosama sirius*.

Papilio sirius, Fabricius, Syst. Ent. p. 488 (1775).

♂. Amboina.

20. *Ypthima norma*.

Ypthima norma, Westwood, Gen. Diurn. Lep. pl. lxvii. fig. 1 (1851).

♂. Amboina.

NYMPHALINÆ.

21. *Doleschallia australis*.

Doleschallia australis, Felder, Reise der Nov. Lep. iii. p. 405, pl. li. figs. 1, 2 (1867).

Ké Dulan, 25th September, 1874.

22. *Messaras Crameri*.

Messaras Crameri, Felder, Sitz. Akad. Wiss. Wien, math -nat. Cl. xl. p. 449 (1860).

Amboina.

23. *Cethosia insulata*.

Cethosia insulata, Butler, Cist. Ent. i. p. 165 (1873).

Ké Dulan, 25th September, 1874.

24. *Cethosia cydippe*.

Papilio cydippe, Linnæus, Syst. Nat. i. p. 776 (1766).

♂. Amboina.

25. *Hypolimnas nerina*.

Papilio nerina, Fabricius, Syst. Ent. p. 509 (1775).

♂ ♀. Ternate.

26. *Hypolimnas lasinassa*.

Papilio lasinassa, Cramer, Pap. Exot. ii. pl. ccv. A, B (1779).

♂. Amboina.

27. *Precis hedonia*.

Papilio hedonia, Linnæus, Mus. Lud. Ulr. p. 279 (1764).

Amboina.

28. *Precis timorensis*.

Junonia timorensis, Wallace, Trans. Ent. Soc. 1869, p. 346.

Ké Dulau, 25th September, 1874.

Lycænidaë.

29. *Gerydus Boisduvalii*, sp. n.

Symathus pandu, Boisduval (*nec* Horsfield), Voy. de l'Astrolabe, p. 73.
n. 2 (1832).

♂ ♀. Amboina.

This species is considerably larger than that from Java, and, curiously enough, the colouring of the sexes is reversed, the male of the Amboinese species having the basal three fifths of the primaries white clouded with grey at the base, and the female with a narrow angulated white band, nearly as in *G. leos*.

30. *Gerydus stygianus*, sp. n.

Allied to *G. learchus*; above fuliginous brown with bronze reflections; a whitish fusiform spot at base of third median branch: wings below greyer than in Felder's figure of *G. learchus*, with a faint lilac tint, the markings rather narrower and the band across the disk of primaries uninterrupted. Expanse of wings 37 millim.

Ternate.

Unfortunately only one somewhat damaged example was obtained of this interesting species.

31. *Tarucus plinius*.

Hesperia plinius, Fabricius, Ent. Syst. iii. 1, p. 284 (1793).

♂. Amboina.

32. *Catochrysops trifracta*, sp. nov.

♂. Deep lilac, the thorax above blue-black; head white; palpi with the terminal joint and a dorsal line black; abdomen blackish grey: wings below much as in *C. cnejus*, but differing noticeably in the fact that the series of spots across the disk of the primaries, instead of forming one slightly irregular stripe, are broken into three parallel oblique bifid white-edged brown dashes, one below the other; the secondaries also have only one subanal black spot with pale yellow zone,

and barely perceptibly touched with metallic scales. Expanse of wings 23-28 millim.

(Two damaged examples.)

Rat Island, Straits of Malacca, 1st September, 1873.

33. *Lampides alianus*.

Hesperia alianus, Fabricius, Ent. Syst. iii. 1, p. 280 (1793).

♂ ♀. Ké Dulan, 25th September, 1874.

34. *Lampides aetherialis*, sp. n.

♂. Pale silvery blue above; primaries with a narrow grey external border and blackish fringe: secondaries with a sub-marginal series of seven blackish spots, the fifth largest, the sixth and seventh confluent; a black marginal line; costal and abdominal borders pearl-white: body bluish white; head and collar brown. Wings below brownish grey, with white and black markings, arranged as in *L. aratus*, except that the orange zones of the ocelloid spots of secondaries are narrower. Expanse of wings 31 millim.

♀. Smaller, whiter above, the grey border of primaries broader. Expanse of wings 29 millim.

Ké Dulan, 25th September, 1874.

The male of this species is of a beautiful silvery-blue colour, most nearly approached in *Ialmenus evagoras* of Australia, but of a purer (less green) shade. The female is more like *L. aratus*.

35. *Lampides aratus*.

Papilio aratus, Cramer, Pap. Exot. iv. pl. cclxv. A, B (1782).

♂ ♀. Amboina, Ternate.

36. *Lycæna erinus*?

Hesperia erinus, Fabricius, Syst. Ent. p. 525 (1775).

Ternate.

The examples are so much rubbed that it is impossible to be sure of this identification.

Papilionidæ.

PIERINÆ.

37. *Delias plexaris*.

Papilio plexaris, Donovan, Ins. New Holl. pl. xviii. fig. 2 (1805).

♂ ♀. Amboina.

38. *Terias photophila*, sp. n.

♂. Gamboge-yellow, with black borders, as in *T. hecabe*, from which, however, it differs in being considerably smaller, in its pale colour, and narrower primaries; below lemon-yellow, the borders visible through the wings; the usual markings, with the exception of the black marginal dots, ill defined. Expanse of wings 32 millim.

Ké Dulan, 25th September, 1874.

Nearest in size, form, and pattern of primaries to *T. variata*, but deeper in colour, with well-defined border to the secondaries, and no subapical brown patch on the under surface of the primaries.

39. *Terias biformis*, sp. n.

Allied to *T. eumide* and *T. hecabe*, the male differing from the latter in its bright lemon-yellow (instead of deep gamboge) colour, the external border obliquely cut off at external angle and continued as a narrow squamose streak along the internal margin; the border of the secondaries narrower, more deeply sinuated, and terminating in a few brown scales at the first median branch, beyond which are only the usual black marginal dots; the female creamy white, with broad brown borders, formed as in the male of *T. sari*. Expanse of wings 43 millim.

♂ ♀. Amboina.

This is the first recorded instance of a species in this section of the genus having a white female. It is a most interesting form, being one of the links between the *T. rahel* and *T. hecabe* groups of species.

40. *Terias puella*.

Xanthidia puella, Boisduval, Voy. de l'Astrolabe, Léop. p. 60, pl. ii. fig. 8 (1832).

♂. Ternate.

41. *Terias lerna*.

Terias lerna, Felder, Sitzb. Ak. Wiss. Wien, math.-nat. Cl. xl. p. 448 (1860).

Amboina.

*PAPILIONINÆ.*42. *Ornithoptera criton*.

Ornithoptera criton, Felder, Wien. ent. Monatschr. iv. p. 225 (1860); Reise der Nov. Lep. i. p. 12, pl. iv. a-c (1865).

♂ ♀. Ternate.

Unfortunately, like all the specimens collected at Ternate, the pair obtained is much broken.

43. *Papilio deiphontes*.

Papilio deiphontes, Felder, Reise der Nov. Lep. i. p. 126 (1865).

♂. Ternate.

44. *Papilio nicanor*.

Papilio nicanor, Felder, Reise der Nov. Lep. i. p. 102, pl. x. c, d (1865).

Ternate.

45. *Papilio severus*.

Papilio severus, Cramer, Pap. Exot. iii. pl. cclxxvii. A, B (1782).

♂ ♀. Amboina.

46. *Papilio Thomsonii*, sp. n.

♂. Black-brown, primaries with paler scales sprinkled over the basal area, a costal and four discoidal divergent longitudinal lines of pale scales; costa, apex, and external border fuliginous brown; traces of an oblique, subapical, creamy whitish bar sometimes present; a broad irregular creamy-white belt or patch (somewhat as in *P. severus*, but wider and tapering to abdominal border, where it is squamose) across the extremity of the discoidal cell and the disk of secondaries; sinuations of the external border with narrow cream-white fringe: body as usual. Primaries below smoky brown, the cell and the disk from the upper radial, with the exception of the veins and a broad external border, blackish; sometimes three squamose oval creamy whitish spots placed obliquely beyond the cell; the divergent lines of scales as above: secondaries black-brown, smoky brown upon the basi-abdominal area, which is also sprinkled with white scales; no trace of the broad white belt of the upper surface; seven large black spots enclosing orange lunate spots parallel to outer margin; sinuations of outer margin white. Expanse of wings 113-120 millim.

♂. Ké Dulan, 25th September, 1874.

47. *Papilio ulysses*.

Papilio ulysses, Linnæus, Mus. Lud. Ulr. p. 201 (1764).

♀. Amboina.

48. *Papilio polyphontes*.

Papilio polyphontes, Boisduval, Sp. Gén. Lép. i. p. 268 (1836).

♀. Ternate.

The single damaged example before me differs slightly from the Celebesian type, the white areas on the primaries being interrupted by a rather broad and very oblique band of the ground-colour; this may, however, prove to be an individual variation.

Hesperiidæ.

49. *Hesperia celænus*.

Papilio celænus, Cramer, Pap. Exot. iv. pl. cccxcvi. A, B (1782).

♂. Amboina.

50. *Pamphila Moseleyi*, sp. n.

♂. Upper surface similar to *P. phineus*, but larger, blacker, the base not streaked with fulvous, the angular discal band of the primaries narrower and that of the secondaries nearly twice as broad; below these bands are decidedly yellow; the apical area of the primaries and the whole ground-colour of the secondaries are pale olivaceous instead of ochraceous or clay-coloured, and there is a large patch of black near the anal angle of the latter wings. Expanse of wings 47 millim.

Ké Dulan, 25th September, 1874.

51. *Pamphila phineus*.

Papilio phineus, Cramer, Pap. Exot. ii. pl. clxxvi. E (1779).

♂. Amboina.

Cramer's locality "Surinam" is here, as in other instances, erroneous; it is evident that some of the insects received by him from the two localities got confounded either through his own carelessness or that of those from whom he received them.

52. *Pamphila prusias*.

Pamphila prusias, Felder, Sitzb. Ak. Wiss. Wien, math.-nat. Cl. xliii. p. 44 (1861).

Amboina.

53. *Padraona sunias*?

Pamphila sunias, Felder, Sitzb. Ak. Wiss. Wien, math.-nat. Cl. xl. p. 462 (1860).

Ké Dulan, 25th September, 1874.

The single example before me is rather aberrant; it is, however, somewhat broken, and may be only individually separable from the Amboinese form.

54. *Tagiades japetus*.

Papilio japetus, Cramer, Pap. Exot. iv. pl. cclxv. E (1782).

Amboina.

This species is also in the British Museum from Ké Island.

Sphingidæ.

55. *Protoparce cingulata*.

Sphinx cingulata, Fabricius, Syst. Ent. p. 545 (1775).

♂. Ternate.

The appearance of this New-World species at Ternate is very surprising; it is probably only an accidental immigrant. The specimen was much worn and shattered, and may have been long on the wing. Some of the Sphingidæ have been taken at an almost incredible distance from land, showing that their flight is not only extremely rapid, but capable of being sustained for a considerable time.

Agaristidæ.

56. *Ophthalmis lincea*.

Phalæna lincea, Cramer, Pap. Exot. iii. p. 61, pl. cexxviii. B (1782).

Ké Dulan, 25th September, 1874.

Originally described from an Amboinese example supposed by Cramer to have come from Surinam; the species is found (and is probably common) at Ceram and New Ireland; an allied species, *O. bambucina*, takes its place in the Philippines.

Cocytidæ.

57. *Cocytia Durvillei*.

Cocytia Durvillei, Boisduval, Mon. Zyg. p. 22, pl. i. fig. 1 (1829).

Ké Dulan, 25th September, 1874.

Not rare in New Guinea, though doubtless a rapid flier.

Zygænidæ.

58. *Euchromia ganymede*.

Glaucopis ganymede, Doubleday, Lort's Discov. Austral., Append. i. p. 519, pl. iii. fig. 3.

♂. Ké Dulan, 25th September, 1874.

Lithosiidæ.

59. *Dyphlebia liboria*.

Phalæna liboria, Cramer, Pap. Exot. iv. p. 106, pl. cccxlv. D (1782).

♀. Amboina.

60. *Hypsa heliconia*.

Phalæna (Noctua) heliconia, Linnæus, Syst. Nat. i. p. 839 (1766).

♂ ♀. Amboina.

61. *Hypsa lanceolata*.

Hypsa lanceolata, Walker, Cat. Lep. Het. vii. p. 1675 (1856).

♀. Amboina.

Originally described from a female obtained at Celebes. We have a male in the Museum probably from the same collection.

62. *Cleis evander*.

Papilio evander, Cramer, Pap. Exot. iv. pl. cccxxxi. F, G (1782).

♂ ♀. Amboina.

Liparidæ.

63. *Artaxa simulans*, sp. n.

A remarkable copy of *Ophthalmis lineea* from the same locality. Primaries black-brown, densely irrorated with black scales; a large ochreous spot at apex: secondaries with the basi-abdominal half black and the externo-apical half bright orange, the line of demarcation between the two areas being elbowed outwardly at the inferior angle of the cell: head, antennæ, collar, tegulæ, and prothorax ochreous; remainder of thorax and abdomen black; anal tuft pale testaceous. Wings below as above. Expanse of wings 47 millim.

Amboina.

This is one of those instances of mimetic assimilation so perfect as to catch the eye at the first glance. That the Agaristid is the species copied cannot be questioned, since it is not only a common form, but it belongs to a group which, like the allied Zygænidæ, is evidently distasteful to insect enemies.

64. *Stilpnotia*, sp.

A white species, too much injured to be described, but interesting as representing the genus in a locality where it would not have been supposed to occur.

♀. Amboina.

65. *Pegella ichorina*, sp. n.

♀. Allied to *P. curvifera*. Primaries above white, crossed by three nearly equidistant golden-brown stripes—the first interrupted, angulated, just before the basal fourth of the wing, the second rather broad, oblique, crossing the middle of the wing, and confluent with an angular discocellular fasciole of the same colour, the third narrow, oblique, crossing the disk halfway between the central stripe and the outer margin; two or three basal spots, the veins, a spot in the cell, and a marginal series of spots golden brown: secondaries rose-pink, becoming gradually white towards outer margin, where there is a series of little brown dashes: body above sordid whitish; antennæ black. Wings below white, showing traces of the markings of the upper surface; costal borders and veins sordid; marginal spots or dashes as above; interno-median area of primaries slightly tinted with pink; secondaries with the basal two thirds tinted with pink; abdominal area washed with rose-pink: body sordid whitish; anterior legs blackish. Expanse of wings 100 millim.

Amboina.

Euschemidæ.

66. *Bursada perdica*.

Phalena perdica, Cramer, Pap. Exot. ii. p. 126, pl. clxxviii. E (1779).

Var. *Bursada truncata*, Walker, Cat. Lep. Het. Suppl. p. 191 (1864).

♂ ♀. Amboina.

Of this species an instructive series was obtained, completely linking the two forms associated above.

67. *Craspedosis ernestina*.

Phalena Geometra ernestina, Cramer, Pap. Exot. iv. p. 155, pl. cccclxix. F (1782).

Celerena sobria, Walker, Cat. Lep. Het. Suppl. p. 164 (1864).

♂ ♀. Amboina.

In his 'Catalogue' Walker states that *C. sobria* is the type of his genus *Celerena*; the latter genus, however, had been already described by him in the 'Transactions of the Entomological Society' for 1862, pp. 71, 72, with *C. divisa* as type. The two species are not congeneric.

Uraniidæ.

68. *Alcidis orontes*.

Papilio orontes, Linnæus, Amœn. Acad. vi. p. 402.

♀. Amboina.

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Palyadæ.

69. *Eumelea rosalia*.

Phalæna Geometra rosalia, Cramer, Pap. Exot. iv. p. 152, pl. cccclxviii. F (1782).

Ké Dulan, 25th September, 1874.

70. *Eumelea ludovicata*.

Eumelea ludovicata, Guénée, Phal. i. p. 393.

Amboina.

Acontiidæ.

71. *Xanthodes transversa*.

Xanthodes transversa, Guénée, Noct. ii. p. 211 (1852).

Xanthodes intercepta, Walker (nec Guénée), Cat. Lep. Het. xii. p. 778 (1857).

Ké Dulan, 25th September, 1874.

Walker transposed *X. transversa* and *intercepta* in his 'Catalogue.'

Hypopyridæ.

72. *Spiramia funestis*, sp. n.

♂. Nearest to *S. spiralis*; velvety fuliginous brown, paler beyond the middle and at the base of the primaries, the pale area being bounded by an elbowed black stripe; two ill-defined blackish diffused discal stripes, the inner one separating the dark and pale areas, sinuous on the primaries and regularly undulated but straight and central on the secondaries, the outer one bounding the external area, terminating before the apex of the primaries in an oblique angle and barely visible upon the secondaries; the usual spiral ocelloid marking with the spot unusually small and less black than usual; external area slightly greyish, fringe whitish: primaries with a submarginal series of black dots: thorax as usual, brown varied with black; abdomen velvety black, with the two terminal segments vermilion. Wings below smoky brown, with pale fringe; the primaries crossed beyond the middle and the secondaries in the middle by two parallel dusky stripes, slightly inangled towards the costal margin of primaries and arched on the secondaries: body below vermilion; tibiae and tarsi brown; anus pale ochreous. Expanse of wings 71 millim.

♂. Amboina.

Ophiuridæ.

73. *Ophiura simillima*.*Ophiura simillima*, Guénée, Noct. iii. p. 266 (1852).

Amboina.

Margarodidæ.

74. *Glyphodes? Ledereri*, sp. n.*Glyphodes actorionalis*, Lederer (nec Walker), Wien. ent. Monatschr. vii. pl. xiv. fig. 4 (1863).

Amboina.

Walker's species comes nearer to Lederer's *G. Zelleri*. I am not satisfied that *G. Ledereri* is a true *Glyphodes*.

XXIV.—Report on the Polyzoa of the Queen Charlotte Islands.

By the Rev. THOMAS HINCKS, B.A., F.R.S.

[Concluded from page 58.]

[Plate IX.]

Suborder CYCLOSTOMATA.

Family Crisiidæ.

CRISIA (part.), Lamouroux.

Crisia cornuta, Linnæus.

Houston-Stewart Channel; Virago Sound; common.

[Norway, Britain, Brittany, Mediterranean.]

Crisia eburnea.

Virago Sound.

[North and Arctic Seas, St. Lawrence, Labrador, St. George's Banks, California, Fiji Islands, New Zealand and Australia, Madeira, Mediterranean, Britain.]

Crisia denticulata, Lamarck.

Houston-Stewart Channel.

[Kara Sea, Norway, Spitzbergen, Grand Manan, Britain, Adriatic, Madeira, South Africa.]